



Practitioner's Docket No. 10729794

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Anderson, David R., Emily J. Reinhard, Stephen A. Kolodziej, William F. Vernier, and Shridhar G. Hegde

Application No.: 10/729,794

Group No.: 1625

Filed: December 5, 2003

Examiner: Charanjit S. Aulakh

For: METHOD OF MAKING TRICYCLIC AMINOCYANOPYRIDINE COMPOUNDS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT  
BEFORE MAILING DATE OF EITHER A FINAL ACTION  
OR NOTICE OF ALLOWANCE (37 C.F.R. § 1.97(c))

TIME OF TRANSMITTAL OF ACCOMPANYING  
INFORMATION DISCLOSURE STATEMENT

1. The information disclosure statement transmitted herewith is being filed *after* three months of the filing date of this national application or the date of entry of the national stage as set forth in Section 1.491 in an international application or after the mailing date of the first Office action on the merits, whichever event occurred last but *before* the mailing date of either

- (1) a final action under § 1.113 or  
(2) a notice of allowance under § 1.311

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37 C.F.R. § 1.8(a)

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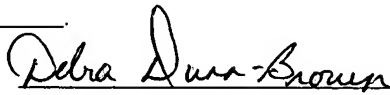
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TRANSMISSION

☐ facsimile transmitted to the Patent and Trademark Office, (703) \_\_\_\_\_

07/02/2004 BABRAHA1 00000020 10729794

01 FC:1806 Date: 6/28/04 180.00 DP

  
Signature

Debra Dunn-Brown

(type or print name of person certifying)

\* Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office to Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

whichever occurs first.

### **FEE**

2. Accompanying this transmittal is the fee for submission of an information disclosure statement under section 1.97(c). (\$180.00)

### **FEE PAYMENT**

3. Applicant elects the option to pay the fee set forth in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under § 1.97(c) (\$180.00).

Fee due \$180.00

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4. Attached is Check No. 24746 in the amount of \$180.00.


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A duplicate of this paper is attached.

Date:

June 28, 2004

Reg. No.: 35,124  
Tel. No.: 864-250-2238

  
\_\_\_\_\_  
Signature of Practitioner

Charles E. Dunlap  
Nelson Mullins Riley & Scarborough, LLP  
1320 Main Street - 17th Floor  
Columbia, SC 29201



<b>Form PTO-1449</b>  <b>INFORMATION DISCLOSURE CITATION</b> <b>IN AN APPLICATION</b> <i>(Use several sheets if necessary)</i>	Docket Number Optional 18438/09040	Application Number 10/729,794
	Applicant Anderson, et al.	Filing Date December 5, 2003
	Examiner Unknown	Group Art Unit Unknown

### U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6 4 3 2 9 6 2	08/13/02	Horneman	514	255.06	
	6 3 3 5 3 4 0	01/01/02	Gallagher et al.	514	252.05	
	6 2 6 8 1 6 3	07/31/01	Kongsbak et al	435	15	
	6 2 1 8 1 3 6	04/17/01	Kumar et al.	435	15	
	6 0 4 6 2 0 8	04/04/00	Adams et al	514	274	

### FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	Translation	
						YES	NO
	WO 99/51735	14.10.99	Alexey Kotlyarov, et al.	C12N	15/11		X
	WO 01/29037 A2	26.04.01	Barry L. Johnson, et al.	C07D	471/00	X	
	WO 01/47892 A1	05.07.01	Dan M. Berger, et al.	C07D	215/54	X	

### OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	United States Patent Application Publication, Pub. No. US 2001/051620 A1, December 13, 2001
	Article from Bioorganic & Medicinal Chemistry Letters, Vol. 5, No. 23, pp. 2783-2788, 1995 by C. W. Smith et al., entitled The Anti-Rheumatic Potential of a Series of 2,4-Di-substituted-4H-Naphtho[1,2-b]Pyran-3-Carbonitriles.
	Abstract No. 132:260099 entitled "Anti-Inflammatory Substances" by N. Hirasawa et al., <i>Tanpakushitsu Kakusan Koso</i> , 45(6): 1199-1203 (2000)
	Abstract from J. Biol Chem., 2003 Jan., Vol. 278(3), pp. 1450-1456 by J.R. Burke et al. entitled BMS-34551 is a highly selective inhibitor of I kappa B kinase that binds at an allosteric site of the enzyme and blocks NF-kappa B-dependent transcription in mice.
	Abstract from The Journal of Biochemical Chemistry, 2002 Oct., Vol. 367(Pt 2): pp. 525-532 by A. Knebel, et al. entitled Stress-induced regulation of eukaryotic elongation factor 2 kinase by SB 203580-sensitive and -insensitive pathways.
	Abstract from Biochim Biophys. Acts., 2002 July, Vol. 1598(1-2): pp. 88-97 by J.F. Schindler et al. entitled Examination of the kinetic mechanism of mitogen-activated protein kinase activated protein kinase-2.
	Article from FEBS Letters 392 (1996), pp. 209-214 by A. Clifton et al. entitled A comparison of the substrate specificity of MAPKAP kinase-2 and MAPKAP kinase-3 and their activation by cytokines and cellular stress.
	Article from FEBS Letters 364 (1995), pp. 229-233 by A. Cuenda et al. entitled SB 203580 is a specific inhibitor of a MAP kinase homologue which is stimulated by cellular stresses and interleukin-1.
	Article from The Journal of Immunology, 2000 July, 165: pp. 3951-3958, by A. K. De et al. entitled Exaggerated Human Monocyte IL-10 Concomitant to Minimal TNF- $\alpha$ Induction by Heat-Schock Protein 27 (Hsp27) Suggests Hsp27 is Primarily an Antiinflammatory Stimulus.
	Article from The American Society for Biochemistry and Molecular Biology, Inc., 1995 Nov., Vol.:270(45), pp. 27213-27221 by K. Engel et al. entitled Constitutive Activation of Mitogen-activated Protein Kinase-activated Protein Kinase 2 by Mutation of Phosphorylation Sites and an A-helix Motif(*)
	Article from The Journal of Biological Chemistry, 1997 Feb., Vol. 272(6): pp. 3296-3301 by I. N. Foltz et al. entitled Hemopoietic Growth Factors with the Exception of Interleukin-4 Activate the p38 Mitogen-activated Protein Kinase Pathway.
	Article from Biochemical Journal, 1995 Sept., 311(Pt. 3): pp. 735-738 by G. W. Gould et al. entitled The activation of distinct mitogen-activated protein kinase cascades is required for the stimulation of 2-deoxyglucose uptake by interleukin-1 and insulin-like growth factor-1 in KB cells.

Form PTO-1449		Docket Number Optional 18438/09040	Application Number 10/729,794
<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b> <i>(Use several sheets if necessary)</i>		Applicant Anderson, et al.	Filing Date December 5, 2003
		Examiner Unknown	Group Art Unit Unknown
	Article from The Journal of Immunology, 2001 July, 167: pp. 3953-3961 by M. O. Hannigan et al. entitled Abnormal Migration Phenotype of Mitogen-Activated Protein Kinase-Activated Protein Kinase 2 <sup>-/-</sup> Neutrophils in Zigmond Chambers Containing Formyl-Methionyl-Leucyl-Phenylalanine Gradients.		
	Article from The Journal of Biological Chemistry, 1999 May, Vol. 274(20): pp. 14434-14443 by O. Heidenreich et al. entitled MAPKAP Kinase 2 Phosphorylates Serum Response Factor in Vitro and in Vivo*.		
	Article from The Journal of Biological Chemistry, 2001 July, Vol. 276(45): pp. 41856-41861 by R. Janknecht entitled Cell Type-specific Inhibition of the ETS Transcription Factor ER81 by Mitogen-activated Protein Kinase-activated Protein Kinase 2*.		
	Article from Biochemical Society Transactions, 2002, Vol. 30(6): pp. 959-963 by A. Kotlyarov et al. entitled Is MK2 (mitogen-activated protein kinase-activated protein kinase 2) the key for understanding post-transcriptional regulation of gene expression?		
	Article from Nature Cell Biology 1999 June, Vol. 1: pp. 94-97 by A. Kotlyarov et al. entitled MAPKAP kinase 2 is essential for LPS-induced TNF- $\alpha$ biosynthesis.		
	Article from The Journal of Immunology, 2002 March, Vol. 168(9): pp. 4667-4673 by M. D. Lehner et al. entitled Mitogen-Activated Protein Kinase-Activated Protein Kinase 2-Deficient Mice Show Increased Susceptibility to <i>Listeria monocytogenes</i> Infection.		
	Article from Molecular Endocrinology, 2001, Vol. 15(5): pp. 716-733 by E. T. Maizels et al. entitled Developmental Regulation of Mitogen-Activated Protein Kinase-Activated Kinases-2 and -3 (MAPKAPK-2/-3) in Vivo during Corpus Luteum Formation in the Rat.		
	Article from The Journal of Biochemical Chemistry, 1998 Sept., Vol. 273(38): pp. 24832-24838 by K. Miyazawa et al entitled Regulation of Interleukin-1 $\beta$ -induced Interleukin-6 Gene Expression in Human Fibroblast-like Synoviocytes by p38 Mitogen-activated Protein Kinase.		
	Article from Circulation Research, 2000 Feb.: pp. 144-151 by N. Nakano et al. entitled Ischemic Preconditioning Activates MAPKAPK2 in the Isolated Rabbit Heart.		
	Article from The Journal of Neuroscience, 1998 March, Vol. 18(5): pp. 1633-1641 by N. Bhat et al. entitled Extracellular Signal-Regulated Kinase and p38 Subgroups of Mitogen-Activated Protein Kinases Regulate Inducible Nitric Oxide Synthase and Tumor Necrosis Factor- $\alpha$ Gene Expression in Endotoxin-Stimulated Primary Glial Cultures.		
	Article from The Journal of Biological Chemistry, 2002 Feb., Vol. 277(5): pp. 3065-3068 by A. Neiningner et al. entitled MK2 Targets AU-rich Elements and Regulates Biosynthesis of Tumor Necrosis Factor and Interleukin-6 Independently at Different Post-transcriptional Levels*.		
	Article from The Journal of Biological Chemistry, 2000 April, Vol. 275(15): pp. 11284-11290 by E. Paine et al. entitled Arachidonic Acid Activates Mitogen-activated Protein (MAP) Kinase-activated Protein Kinase 2 and Mediates Adhesion of a Human Breast Carcinoma Cell Line to Collagen Type IV through a p38 MAP Kinase-dependent Pathway.		
	Article from Blood, 1999 Jan., Vol. 93(1): pp. 217-225 by M. P. Scheid et al. entitled Ceramide and Cyclic Adenosine Monophosphate (cAMP) Induce cAMP Response Element Binding Protein Phosphorylation via Distinct Signaling Pathways While Having Opposite Effects on Myeloid Cell Survival.		
	Article from Proc. Natl. Acad. Sci, 2000 May, Vol. 97(10): pp. 5261-5266 by O. Werz et al. entitled 5-Lipoxygenase is phosphorylated by p38 kinase-dependent MAPKAP kinases.		
	Article from Kidney International, 2001 March, Vol. 60: pp. 858-871 by W. A. Wilmer et al. entitled Chronic exposure of human mesangial cells to high glucose environments activates the p38 MAPK pathway.		
EXAMINER		DATE CONSIDERED	
<b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.			



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# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ ) 180.00

## Complete if Known

Application Number	10/729,794
Filing Date	December 5, 2003
First Named Inventor	Anderson et al.
Examiner Name	Charanjit S. Aulakh
Art Unit	1625
Attorney Docket No.	18438/09040

## METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit  
Account  
Number  
Deposit  
Account  
Name

50-2548

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)			(\$ ) 0.00

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims  -20\*\* =  X  =   
Independent Claims  -3\*\* =  X  =   
Multiple Dependent  =

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1202 18	2202 9	Claims in excess of 20	
1201 86	2201 43	Independent claims in excess of 3	
1203 290	2203 145	Multiple dependent claim, if not paid	
1204 86	2204 43	** Reissue independent claims over original patent	
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)			(\$ ) 0.00

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 420	2252 210	Extension for reply within second month	
1253 950	2253 475	Extension for reply within third month	
1254 1,480	2254 740	Extension for reply within fourth month	
1255 2,010	2255 1,005	Extension for reply within fifth month	
1401 330	2401 165	Notice of Appeal	
1402 330	2402 165	Filing a brief in support of an appeal	
1403 290	2403 145	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 665	Petition to revive - unintentional	
1501 1,330	2501 665	Utility issue fee (or reissue)	
1502 480	2502 240	Design issue fee	
1503 640	2503 320	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	180
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 770	2810 385	For each additional invention to be examined (37 CFR 1.129(b))	
1801 770	2801 385	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ ) 180.00

## SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	Charles E. Dunlap	Registration No. (Attorney/Agent)	35,124	Telephone	864-250-2238
Signature		Date	June 28, 2004		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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